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AUG 19 2008

**of Correction**

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NABIL GHALY

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(631) 549-0980

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DR. NABIL N. GHALY  
14 Longwood Drive  
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August 12, 2008

Attention Certificate Of Correction Branch  
Commissioner of Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Ref.: US Patent No. RE 40,340E – Issue Date May 27, 2008  
Certificate Of Correction – Office Mistake

Dear Sir:

I am the inventor named in the subject patent. Attached, please find my request to issue a Certificate of Correction for the subject patent, pursuant to 35 USC 254.

Thank you for your cooperation and assistance in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Nabil N. Ghaly".

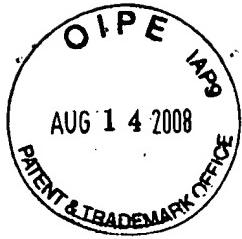
Dr. Nabil N. Ghaly

Attach.

Certified mail 7003 1010 0003 3624 4390  
Return receipt requested

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Patent Publication

AUG 19 2008



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Group Art Unit: 3714

In re PATENT APPLICATION of

Applicant : NABIL N. GHALY

Serial No. : 08/962,971

Filed : October 27, 1997

For : ELECTRONIC HAND HELD  
LOGIC GAME  
REISSUE APPLICATION OF  
U.S. PATENT NO. 5,286,037  
ISSUED FEBRUARY 15, 1994

Examiner : SUNIT PNANDYA

August 12, 2008

Attention Certificate of Corrections Branch

Commissioner of Patents

P.O. Box 1450

Alexandria, VA 22313-1450

CERTIFICATE OF CORRECTION – OFFICE MISTAKE

Sir:

This is to request the issuance of a certificate of correction for Patent No. US RE 40,340E pursuant to 35 USC 254, and as indicated in the attached pages 1 through 6 of the Certificate Of Correction (PTO Form SB/44). The errors and omissions indicated in the attached Certificate Of Correction were incurred through the fault of the Patent and Trademark Office, and are clearly disclosed by the records of the PTO. In view of the fact that there are numerous errors in the specification, errors in the drawings, as well as missing drawings in US Patent No. RE 40,340E, it is respectfully requested that the PTO issue a corrected patent pursuant to 37 CFR 1.322(b).

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PATENT PUBLICATION

AUG 19 2008

## REMARKS

United States Patent Number **RE 40,340E** was issued on May 27, 2008. This patent contains numerous errors in the specification and drawings, and is also missing 4 drawings as fully indicated in the attached Certificate Of Correction.

Items 1, 2 & 3 of the certificate of correction are included in the Applicant's response, dated June 12, 2006, which was filed in the Patent and Trademark Office on June 19, 2006.

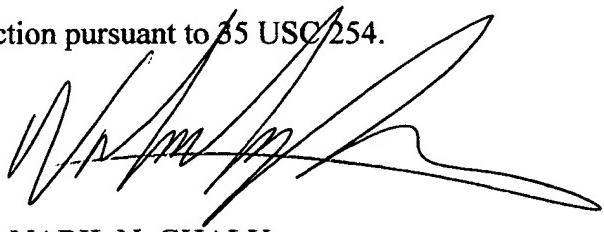
Items 4, 5 & 6 of the certificate of correction are included in the Applicant's Response To Final Rejection, dated November 9, 2006, which was filed in the Patent and Trademark Office on November 13, 2006.

Items 7, 8, 9, 10, 11, 12 & 13 are related to replacement and new drawings that were provided and were filed in the Patent and Trademark Office on January 10, 2007, as well as on June 20, 2007.

Clearly, the errors and omissions in the specification and drawings that are indicated in the attached Certificate Of Correction, were incurred through the fault of the Patent and Trademark Office, and are disclosed by the records of the PTO.

## CONCLUSION

A corrected patent should be issued pursuant to 37 CFR 1.322 (b). In the alternative, the PTO should issue the attached Certificate Of Correction pursuant to 35 USC 254.



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**UNITED STATES PATENT AND TRADEMARK OFFICE**  
**CERTIFICATE OF CORRECTION**

Page 1 of 6

PATENT NO. : US RE40,340 E  
 APPLICATION NO.: 08/962,971  
 ISSUE DATE : MAY 27, 2008  
 INVENTOR(S) : NABIL N. GHALY

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

1. Please replace the paragraph in the specification at column 2, line 52, and ending at column 2, line 57, with the following paragraph:

In an alternative embodiment shown in FIG. 27, the device comprises a liquid crystal display whereon a plurality of geometric shapes may be depicted and wherein a player attempts to discover a pattern of switch positions that results in a singular geometric shape being depicted at all locations on the liquid crystal display.

2. Please replace the paragraph in the specification at column 2, line 58, and ending at column 2, line 60, with the following paragraph:

In other alternative embodiments, the device comprises an interface module to provide multi-color displays, or images, on an external color video monitor. An example of such embodiments is shown in FIG. 28.

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**CERTIFICATE OF CORRECTION**

PATENT NO. : US RE 40,340E  
 APPLICATION NO.: 08/962,971  
 ISSUE DATE : MAY 27, 2008  
 INVENTOR(S) : NABIL N. GHALY

Page 2 of 6

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

3. Please insert the following new paragraph in the specification after the paragraph ending at column 3, line 41:

FIG. 25 indicates two examples of an embodiment, wherein the playing positions are mapped on the surface of a three-dimensional housing such as a sphere, or a cube.

FIG. 26 is a lookup table that illustrates the assignment of the color codes for the 4 x 4 embodiment to two colors.

FIG. 27 indicates an alternate embodiment using keypad switches, and a liquid crystal display screen.

FIG. 28 indicates an alternate embodiment that interfaces with an external video monitor to provide multi-color displays, or a plurality of images.

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**CERTIFICATE OF CORRECTION**

Page 3 of 6

PATENT NO. : **US RE 40,340 E**  
 APPLICATION NO.: **08/962,971**  
 ISSUE DATE : **MAY 27, 2008**  
 INVENTOR(S) : **NABIL N. GHALY**

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

4. Please correct the paragraph in the specification at column 7, line 40 and ending at column 7, line 52 as follows:

It should be noted that the aforestated description of an algorithm to assign color codes to playing positions (as shown in FIGS. 21 & 22) is provided only as an example, and is not intended to limit the invention herein. As would be obvious to a person skilled in the art, there is almost unlimited number of ways to assign the generated color codes to playing positions. [For example, such assignment could be based on a fixed relationship between generated color codes and playing positions.] It should also be noted that a solution to a game, wherein the objective of the game is to provide the same color or image at all playing positions, is independent of how color codes or display codes are assigned to playing positions.

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**UNITED STATES PATENT AND TRADEMARK OFFICE**  
**CERTIFICATE OF CORRECTION**

Page 4 of 6

PATENT NO. : **US RE 40,340 E**  
 APPLICATION NO.: **08/962,971**  
 ISSUE DATE : **MAY 27, 2008**  
 INVENTOR(S) : **NABIL N. GHALY**

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

5. Please correct the paragraph in the specification at column 10, line 44 and ending at column 10, line 51, as follows:

It should be noted that while the above description of the operation of the preferred embodiment employs bi-stable switches to control the routing squares, a routing square could be activated by a keypad switch [, i.e., momentary switch,] to toggle it between its two states indicated in **FIGS. 2a & 2b.** [In such a case, the states of a routing square, rather than the states of the bi-stable switch, are used to provide the various functions described for the preferred embodiment] **It should also be noted that because a switch is an external device to a microprocessor that controls the operation of the device, and because a routing square is an internal element in the software that executes on the microprocessor, and since the states of a routing square reflect the activation of its associated external switch, it follows that the states of a routing square, rather than the states of an associated switch, are used to provide the various functions described for the preferred embodiment.**

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**UNITED STATES PATENT AND TRADEMARK OFFICE**  
**CERTIFICATE OF CORRECTION**

Page 5 of 6

PATENT NO. : US RE 40,340E  
 APPLICATION NO.: 08/962,971  
 ISSUE DATE : MAY 27, 2008  
 INVENTOR(S) : NABIL N. GHALY

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

6. Please correct the paragraph in the specification at column 10, line 52 and ending at column 10, line 61, as follows:

Further, it should [It should also] be noted that the number of colors or images playable by a device is a design choice. [The color codes in the 4x4 embodiment could be assigned to any pre-defined number of visual indications, i.e., to any pre-defined images or colors, including the color reflected from the surface of a display when it is dark. For the 4x4 embodiment, a person with ordinary skills in the art could employ such assignment to operate the device with 2, 3, 4, or 5 colors or images. Similarly, for the 8x8 embodiment, the number of colors or images could be 2 to 9.] A game designer can vary the number of colors playable by a device by making each of the color codes to correspond to either each of a plurality of predetermined colors or to a dark indication. Similarly, a game designer can vary the number of images playable by a device by making each of the display codes to correspond to either each of a plurality of predetermined images or to a blank display.

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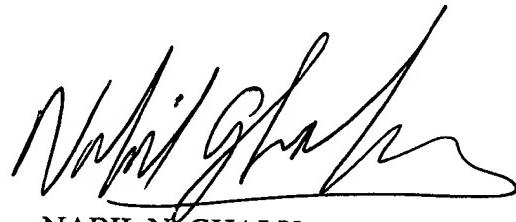
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**CERTIFICATE OF CORRECTION**

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PATENT NO. : US RE 40,340E  
 APPLICATION NO.: 08/962,971  
 ISSUE DATE : MAY 27, 2008  
 INVENTOR(S) : NABIL N. GHALY

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

7. Please replace FIG. 18 with attached replacement sheet.
8. Please replace FIG. 23 with attached replacement sheet.
9. Please replace FIG. 24 with attached replacement sheet.
10. Please include attached new sheet for FIG. 25.
11. Please include attached new sheet for FIG. 26.
12. Please include attached new sheet for FIG. 27.
13. Please include attached new sheet for FIG. 28.



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## REPLACEMENT SHEET

### LEGEND

- N : DIMENSION OF LOGIC GAME = NUMBER OF PREDETERMINED  
COLORS WHICH MAY BE DISPLAYED, (EXCLUDED REFLECTED  
COLOR WHEN DISPLAY IS DARK)  
= 4 (FOR THE PREFERRED EMBODIMENT)
- n : NUMBER OF BINARY BITS IN OPCODE AND COLOR CODE  
=  $\lceil \log_2 N \rceil + 1 = 3$  (FOR THE PREFERRED EMBODIMENT)
- I : ROW NUMBER I,  $I = 1, \dots, N$
- J : COLUMN NUMBER J,  $J = 1, \dots, N$
- DIR : ROUTE DIRECTION BETWEEN TWO ADJACENT ROUTING SQUARES;  
"R" DENOTES RIGHT  
"U" DENOTES UP  
"L" DENOTES LEFT  
"D" DENOTES DOWN
- T : OPCODE TRANSMITTER;  $T = 1, \dots, 2N$
- R : OPCODE RECEIVER;  $R = 1, \dots, 2N$
- RC(T) : RECEIVER CONNECTED TO TRANSMITTER "T"
- TC(R) : TRANSMITTER CONNECTED TO RECEIVER "R"
- W(I,J) : STATUS OF SWITCH LOCATED AT ROW "I" AND COLUMN "J," OR  
STATUS OF ROUTING SQUARE AT ROW "I" AND COLUMN "J"
- TCODE(T) : OPCODE AT TRANSMITTER "T"
- RCODE(R) : OPCODE AT RECEIVER "R"
- C(R) : COLOR CODE AT RECEIVER "R"
- x(i) : THE i<sup>th</sup> BIT OF OPCODE "X"
- y(i) : THE i<sup>th</sup> BIT OF OPCODE "Y"
- cb(i) : THE i<sup>th</sup> BIT OF COLOR CODE "C"
- C1(I,J) : COLOR CODE AT THE RIGHT EDGE OF THE ROUTING SQUARE  
LOCATED AT ROW "I" AND COLUMN "J"
- C2(I,J) : COLOR CODE AT THE TOP EDGE OF THE ROUTING SQUARE  
LOCATED AT ROW "I" AND COLUMN "J"
- C(I,J) : COLOR CODE SELECTED FOR DISPLAY AT THE ROUTING SQUARE  
LOCATED AT ROW "I" AND COLUMN "J"
- ⊕ : EXCLUSIVE OR BOOLEAN FUNCTION
- ⊖ : EXCLUSIVE NOR BOOLEAN FUNCTION

### EXPLANATION OF PROGRAM VARIABLES OF FIGS. 19 - 22

**FIG. - 18 -**

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**REPLACEMENT SHEET**

<b>OPCODE</b>	0 0 0	0 0 1	0 1 0	0 1 1	1 0 0	1 0 1	1 1 0	1 1 1
0 0 0	[Hatched]	[Cross-hatched]	[Diagonal]	[Diagonal]	[White]	[White]	[White]	[White]
0 0 1	[Cross-hatched]	[Vertical]	[Horizontal]	[Diagonal]	[Diagonal]	[White]	[White]	[White]
0 1 0	[Diagonal]	[Horizontal]	[Vertical]	[Diagonal]	[Cross-hatched]	[White]	[White]	[White]
0 1 1	[Diagonal]	[Diagonal]	[Cross-hatched]	[Vertical]	[Vertical]	[White]	[White]	[White]
1 0 0	[White]	[White]	[White]	[White]	[Hatched]	[Cross-hatched]	[Diagonal]	[Diagonal]
1 0 1	[White]	[White]	[White]	[White]	[Cross-hatched]	[Vertical]	[Horizontal]	[Diagonal]
1 1 0	[White]	[White]	[White]	[White]	[Diagonal]	[Vertical]	[Horizontal]	[Cross-hatched]
1 1 1	[White]	[White]	[White]	[White]	[Hatched]	[Diagonal]	[Cross-hatched]	[Vertical]

<b>COLOR CODE</b>	1 0 0	1 0 1	1 1 0	1 1 1	0 --
<b>COLOR</b>	[Diagonal]	[Cross-hatched]	[Vertical]	[Horizontal]	[White]

**COLOR ASSIGNMENT FOR N = 4**

**FIG. - 23 -**

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PERIODIC CHECK

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**REPLACEMENT SHEET**

<b>OPCODE</b>	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
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	0	0	1	1	0	0	1	1	0	0	1	1	0	1	1
	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
<b>0 0 0 0</b>	[Hatched]	[Cross-hatched]	[Diagonal hatched]	[Vertical hatched]	[Horizontal hatched]	[Diagonal hatched]	[Vertical hatched]	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]
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<b>0 1 0 0</b>	[Horizontal hatched]	[Diagonal hatched]	[Solid]	[Vertical hatched]	[Diagonal hatched]	[Solid]	[Vertical hatched]	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]
<b>0 1 0 1</b>	[Diagonal hatched]	[Vertical hatched]	[Solid]	[Horizontal hatched]	[Diagonal hatched]	[Solid]	[Vertical hatched]	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]
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<b>1 1 0 0</b>	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]	[Horizontal hatched]	[Diagonal hatched]	[Vertical hatched]	[Solid]	[Horizontal hatched]	[Diagonal hatched]	[Vertical hatched]
<b>1 1 0 1</b>	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]	[Diagonal hatched]	[Vertical hatched]	[Solid]	[Horizontal hatched]	[Diagonal hatched]	[Vertical hatched]	[Solid]
<b>1 1 1 0</b>	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]	[Hatched]	[Cross-hatched]	[Diagonal hatched]	[Vertical hatched]	[Horizontal hatched]	[Diagonal hatched]
<b>1 1 1 1</b>	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]	[Solid]	[Cross-hatched]	[Vertical hatched]	[Diagonal hatched]	[Horizontal hatched]	[Diagonal hatched]	[Vertical hatched]	[Solid]

<b>COLOR CODE</b>	1000	1001	1010	1011	1100	1101	1110	1111	0---
<b>COLOR</b>	[Hatched]	[Cross-hatched]	[Diagonal hatched]	[Vertical hatched]	[Horizontal hatched]	[Diagonal hatched]	[Vertical hatched]	[Solid]	

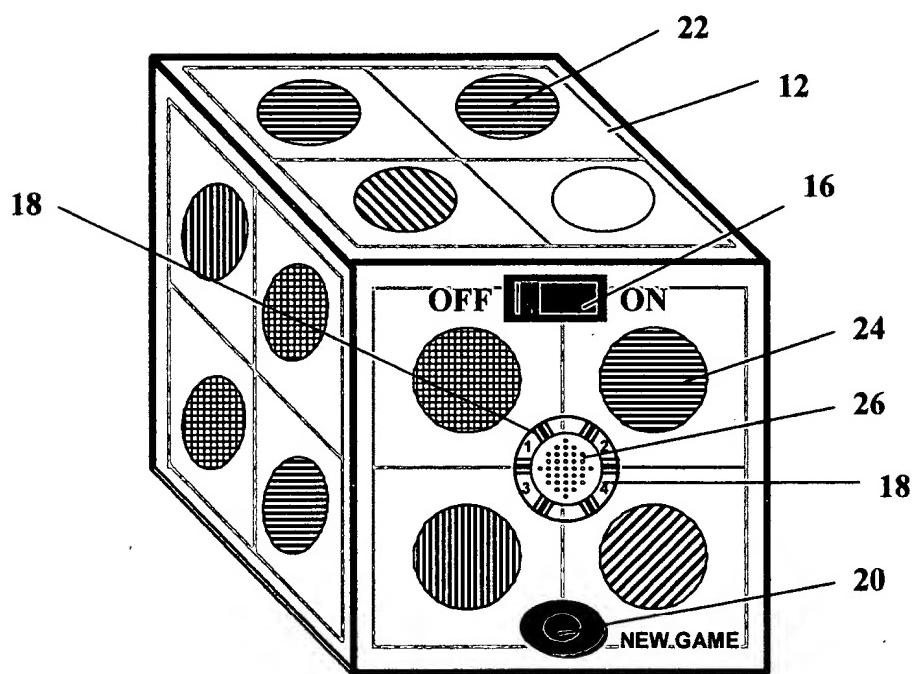
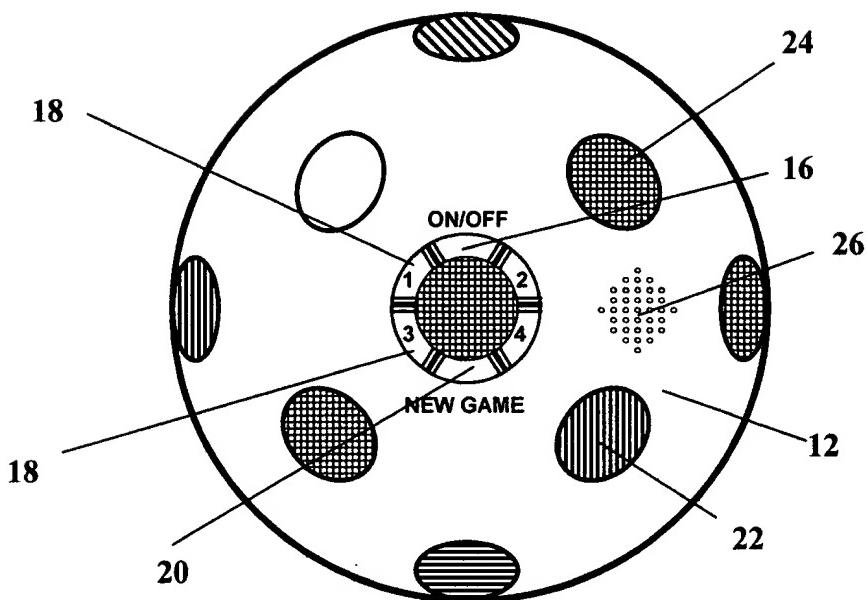
**COLOR ASSIGNMENT FOR N = 8**

**FIG. - 24 -**

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**MAPPING OF INDICATORS ON 3 DIMENSIONAL CONFIGURATION**

**FIG. - 25 -**

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<b>OPCODE</b>	0 0 0	0 0 1	0 1 0	0 1 1	1 0 0	1 0 1	1 1 0	1 1 1
0 0 0								
0 0 1								
0 1 0								
0 1 1								
1 0 0								
1 0 1								
1 1 0								
1 1 1								

<b>COLOR CODE</b>	1 0 0	1 0 1	1 1 0	1 1 1	0 - -
<b>COLOR</b>					

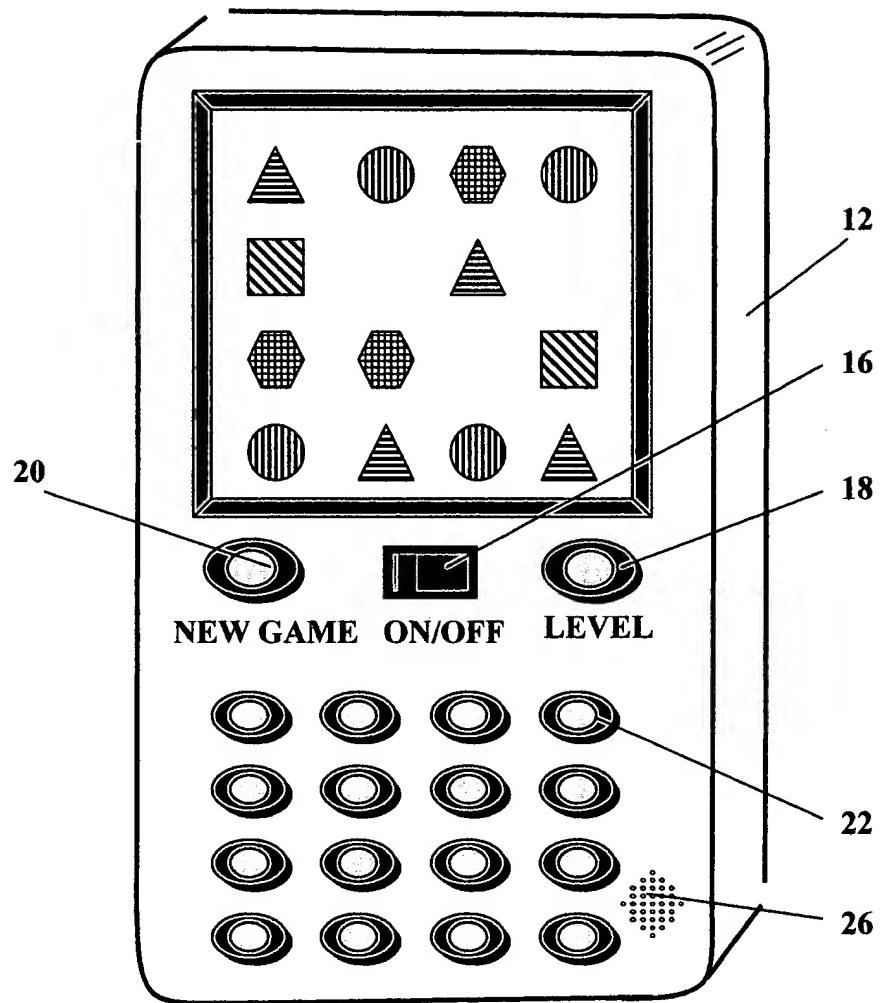
**COLOR ASSIGNMENT FOR N = 4**  
**(Color codes assigned to 2 colors)**

**FIG. - 26 -**

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 Patent Publication

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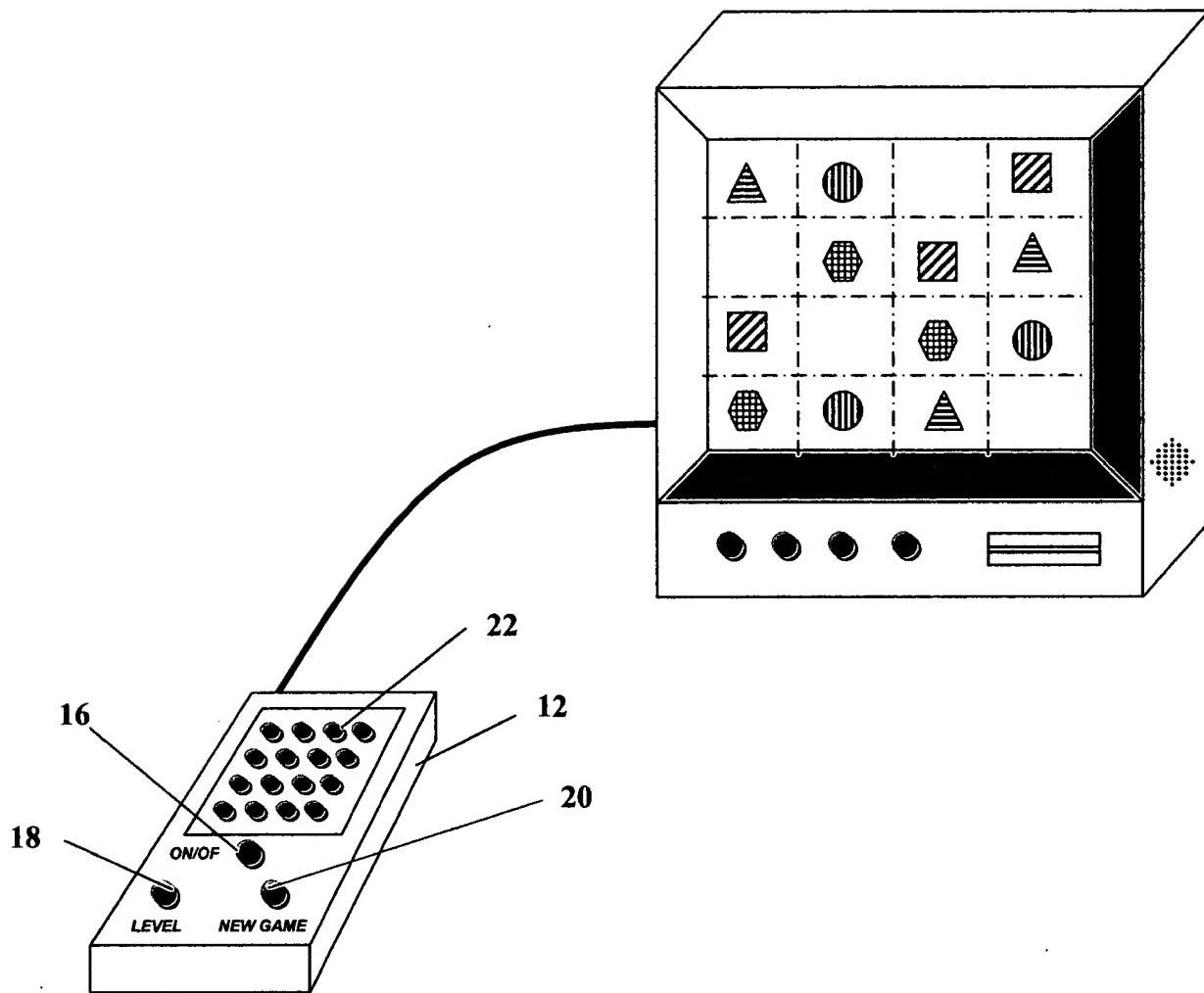
ALTERNATE EMBODIMENT USING LCD SCREEN

FIG. - 27 -

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NEW SHEET



**CONNECTION TO VIDEO MONITOR**

**FIG. - 28 -**

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Public Registration

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## **LEGEND**

- N : DIMENSION OF LOGIC GAME = NUMBER OF PREDETERMINED  
COLORS WHICH MAY BE DISPLAYED, (EXCLUDED REFLECTED  
COLOR WHEN DISPLAY IS DARK)  
= 4 (FOR THE PREFERRED EMBODIMENT)
- n : NUMBER OF BINARY BITS IN OPCODE AND COLOR CODE  
=  $\ln N + 1 = 3$  (FOR THE PREFERRED EMBODIMENT)
- I : ROW NUMBER I,  $I = 1, \dots, N$
- J : COLUMN NUMBER J,  $J = 1, \dots, N$
- DIR : ROUTE DIRECTION BETWEEN TWO ADJACENT ROUTING SQUARES;  
“R” DENOTES RIGHT  
“U” DENOTES UP  
“L” DENOTES LEFT  
“D” DENOTES DOWN
- T : OPCODE TRANSMITTER;  $T = 1, \dots, 2N$
- R : OPCODE RECEIVER;  $R = 1, \dots, 2N$
- RC(T) : RECEIVER CONNECTED TO TRANSMITTER “T”
- TC(R) : TRANSMITTER CONNECTED TO RECEIVER “R”
- W(I,J) : STATUS OF SWITCH LOCATED AT ROW “I” AND COLUMN “J,” OR  
STATUS OF ROUTING SQUARE AT ROW “I” AND COLUMN “J”
- TCODE(T) : OPCODE AT TRANSMITTER “T”
- RCODE(R) : OPCODE AT RECEIVER “R”
- C(R) : COLOR CODE AT RECEIVER “R”
- x(i) : THE i<sup>th</sup> BIT OF OPCODE “X”
- y(i) : THE i<sup>th</sup> BIT OF OPCODE “Y”
- cb(i) : THE i<sup>th</sup> BIT OF COLOR CODE “C”
- C1(I,J) : COLOR CODE AT THE RIGHT EDGE OF THE ROUTING SQUARE  
LOCATED AT ROW “I” AND COLUMN “J”
- C2(I,J) : COLOR CODE AT THE TOP EDGE OF THE ROUTING SQUARE  
LOCATED AT ROW “I” AND COLUMN “J”
- C(I,J) : COLOR CODE SELECTED FOR DISPLAY AT THE ROUTING SQUARE  
LOCATED AT ROW “I” AND COLUMN “J”
- ⊕ : EXCLUSIVE OR BOOLEAN FUNCTION
- ⊖ : EXCLUSIVE NOR BOOLEAN FUNCTION

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## **EXPLANATION OF PROGRAM VARIABLES OF FIGS. 19 - 22**

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**FIG. - 18 - AMENDED**

<b>OPCODE</b>	0 0 0	0 0 1	0 1 0	0 1 1	1 0 0	1 0 1	1 1 0	1 1 1
0 0 0	[Hatched]	[Cross-hatched]	[Diagonal hatched]	[Vertical hatched]				
0 0 1	[Cross-hatched]	[Vertical hatched]	[Diagonal hatched]	[Vertical hatched]				
0 1 0	[Diagonal hatched]	[Vertical hatched]	[Vertical hatched]	[Cross-hatched]				
0 1 1	[Vertical hatched]	[Diagonal hatched]	[Vertical hatched]	[Cross-hatched]				
1 0 0					[Hatched]	[Cross-hatched]	[Diagonal hatched]	[Vertical hatched]
1 0 1					[Cross-hatched]	[Vertical hatched]	[Vertical hatched]	[Diagonal hatched]
1 1 0					[Vertical hatched]	[Diagonal hatched]	[Vertical hatched]	[Cross-hatched]
1 1 1					[Diagonal hatched]	[Vertical hatched]	[Cross-hatched]	[Hatched]

<b>COLOR CODE</b>	1 0 0	1 0 1	1 1 0	1 1 1	0 --
<b>COLOR</b>	[Hatched]	[Cross-hatched]	[Diagonal hatched]	[Vertical hatched]	

**COLOR ASSIGNMENT FOR N = 4**

**FIG. - 23 - AMENDED**

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OPCODE	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
	0	0	0	0	0	1	1	1	1	0	0	0	1	1	1
	0	0	1	1	0	0	1	1	0	0	1	1	0	1	1
	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
<b>0 0 0 0</b>															
<b>0 0 0 1</b>															
<b>0 0 1 0</b>															
<b>0 0 1 1</b>															
<b>0 1 0 0</b>															
<b>0 1 0 1</b>															
<b>0 1 1 0</b>															
<b>0 1 1 1</b>															
<b>1 0 0 0</b>															
<b>1 0 0 1</b>															
<b>1 0 1 0</b>															
<b>1 0 1 1</b>															
<b>1 1 0 0</b>															
<b>1 1 0 1</b>															
<b>1 1 1 0</b>															
<b>1 1 1 1</b>															

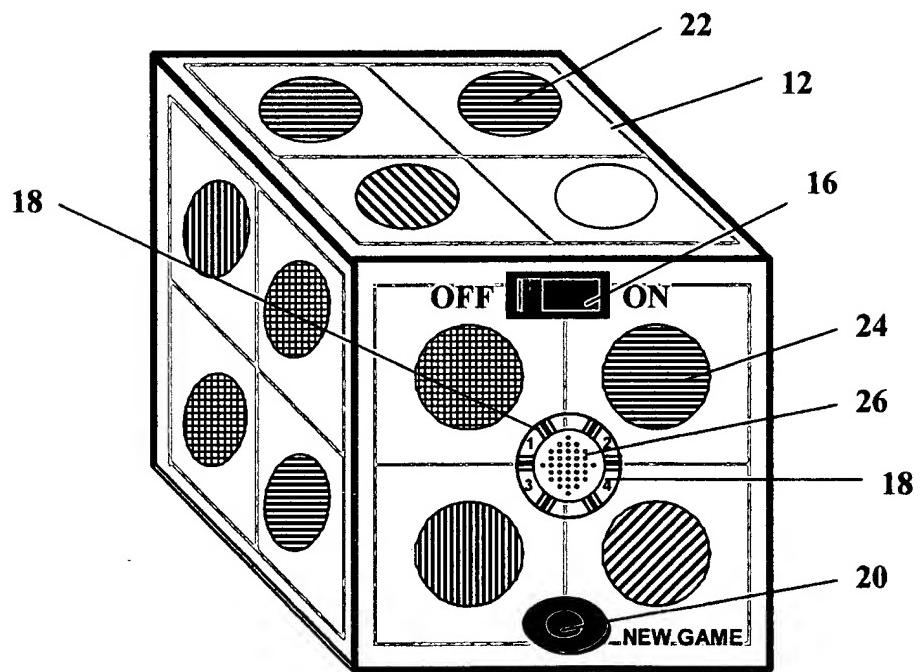
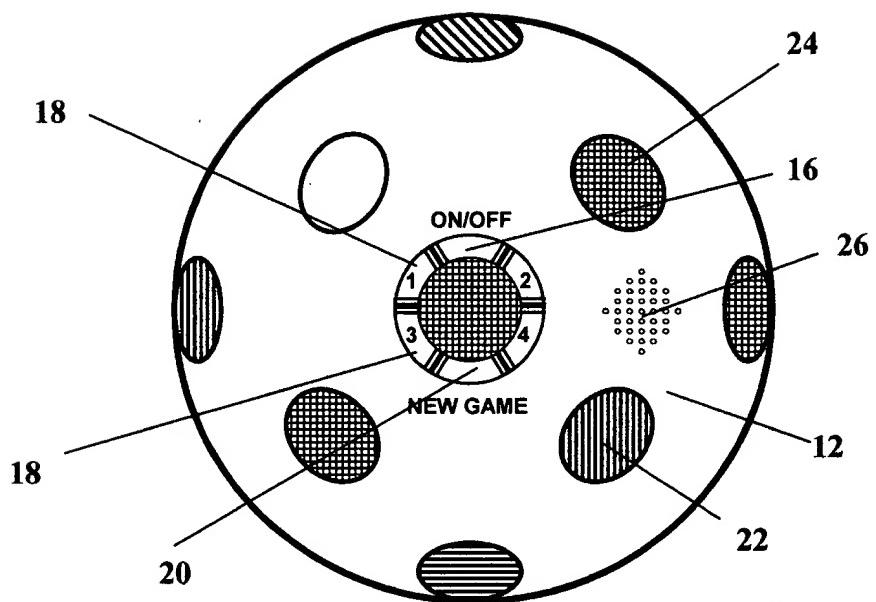
COLOR CODE	1000	1001	1010	1011	1100	1101	1110	1111	0---
COLOR									

### COLOR ASSIGNMENT FOR N = 8

FIG. - 24 - AMENDED

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PROCLAMATION  
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**MAPPING OF INDICATORS ON 3 DIMENSIONAL CONFIGURATION**  
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**FIG. - 25 - NEW**

<b>OPCODE</b>	0 0 0	0 0 1	0 1 0	0 1 1	1 0 0	1 0 1	1 1 0	1 1 1
0 0 0								
0 0 1								
0 1 0								
0 1 1								
1 0 0								
1 0 1								
1 1 0								
1 1 1								

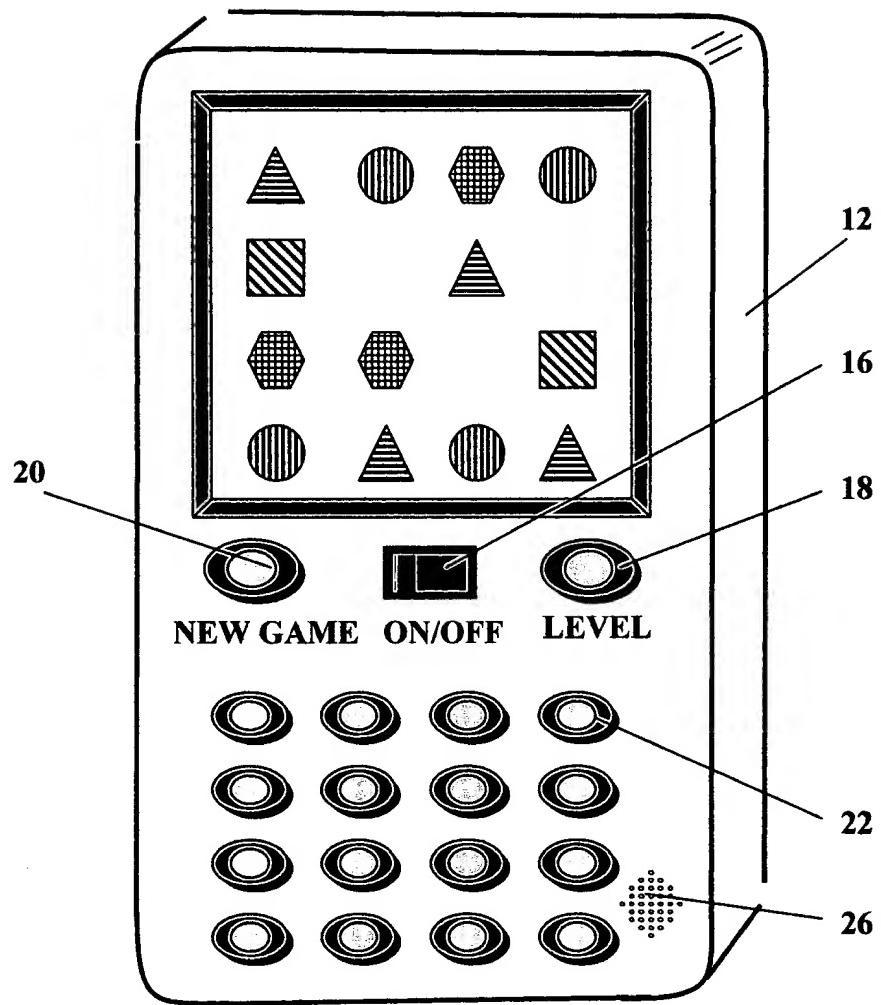
<b>COLOR CODE</b>	1 0 0	1 0 1	1 1 0	1 1 1	0 --
<b>COLOR</b>					

**COLOR ASSIGNMENT FOR N = 4**  
**(Color codes assigned to 2 colors)**

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**FIG. - 26 - NEW**

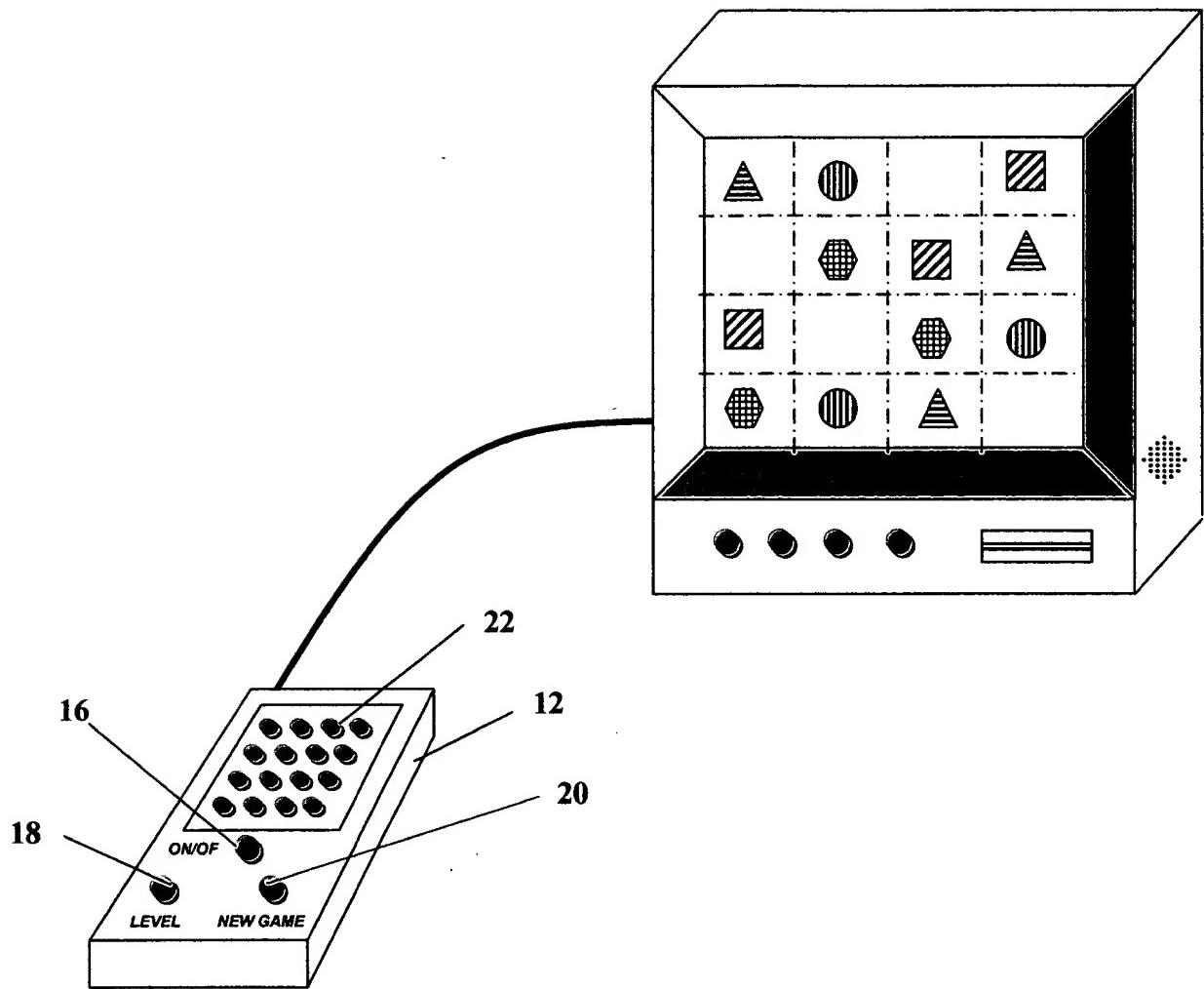


#### **ALTERNATE EMBODIMENT USING LCD SCREEN**

**FIG. - 27 - NEW**

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### CONNECTION TO VIDEO MONITOR

**FIG. - 28 - NEW**

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